

REMARK**Status of Claims**

5 Claims 11-26 were pending at the time of the Examiner mailed her paper 8 on
01/15/04. In paper 8, under "Disposition Of Claims" at line 4, the Examiner shows that
claims 19-24 are withdrawn. Claims 19 - 24 depended from claim 18. The Examiner did
not withdraw claim 18 but rejected claim 18 using 35 U.S.C. 103 using the Bohn reference
in combination with Gagon. The art relied on for the rejection is analyzed below. Claim
18 is amended and arguments are presented below which are believed to distinguish claim
10 18 over Bohn. Claim 18 is believed to be allowable. If claim 18 is allowable, the
Examiner is requested to reconsider the withdrawal of dependent claims 19 - 24 and is
requested to rejoined claims 19 - 24 which continue to depend from claim 18 as
dependent claim depending from an allowable independent claim.

15 An Election of Species was filed on 10/14/03 and it was accompanied by an
Amendment which has the same date. Line 4 of the Examiner's paper 8 shows that the
new claims 18 - 26 were entered by the Examiners. Figures 3 and 4 were elected for
prosecution. The Amendment dated 10/14/03 at the time of the election, added a new
independent claim 18 and new claims 20 through 26. Withdrawn claim 20 depends from
20 claim 2 in error. Claim 20 should have, and is now amended to depended from claim 19.
For this purpose, claim 20 has been indicated above as being "currently amended" but it
should be clear for the record that this claim is in fact currently withdrawn. However,
since the claim erroneously depends from a cancelled claim, it was felt better to correct
this error and in doing so the claim has been identified as being "currently amended."

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To limit the scope of the claims to that of Figures 3 and 4 as required by the
election of species, a decision was made to cancel claims 1 - 10 and to add independent
claim 18 with the functional limitation of the above claim 8 which includes the
30 requirement that the buffer (12) provide a " high, low and mid-range frequency signal
components" not possible with the inverting unity gain amplifier of Figure 2.

Claim 18 (as amended) is believed to be allowable over the art cited for the reasons
given below. If claim 18 is allowable, claims 19 - 25 are also believed to be allowable
35 since they depend from an allowable independent claim.

The Examiner's paper 8 shows that Claims 11-18, 25 and 26 remain for examination. At line 6 of paper 8, the Examiner rejects independent claim 18 on art based on Bohn.

Claim 18, is now amended to be a means plus function claim that has a scope to include all disclosed embodiments performing the recited function, such as the state-variable filter of Figures 3 and 4 and equivalents thereto. A disclosed (via incorporation by reference) embodiment includes the three channel pre-amplifier described in U.S. Patent 5,736,897 for A Low Input Signal Bandwidth Compressor Circuit With A State-Variable Pre-Amplifier that issued on April 7, 1998 to Paul Gagon, a common inventor. U.S. Patent 5,736,897 is cited on the first page of the subject application as filed at lines 28 and 29. The '897' patent is incorporated into the subject application by reference in its entirety.

Rejection Under 35 U.S.C. 103

Claims 11 - 18, 25 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bohn (US 4,891,841) in view of Gagon, (US 5,736,897).

The Examiner rejects claims 11 - 14 and 18 and after characterizing the elements 80, 45 and 35 of Bohn in Bohn's Figure 1 the Examiner states that Bohn fails to show an input buffer.

The Examiner then states that that Gagon teaches "an input buffer with a state-variable filter for providing buffering, compensation for high, mid and low frequencies separately and automatic balancing of the mid and high frequency signals. This input buffer could be used for receiving the signal from a tape player and compensating the bandwidth imposed by the dynamic range of the tape. Thus it would have been obvious to one of ordinary skill in the art to modify Bohn's system by incorporating the buffer as taught in Gagon in order to modify and improve the signal from a tape player."

The rejection is respectfully traversed.

Each of the independent claims, 11, 15 and 18 that remain in the subject application contain a limitation that is either equivalent to or similar to the following phrase found in claim 11 (as currently amended):

a Band-pass filter having a predetermined Q,
[[responsive]] coupled to receive the buffered program

signal [[for providing]] and to provide an inverted Band-pass boosted program signal

The Band-pass filter in the subject application is identified by reference number 22. Bohn identifies his Band-pass filter with reference number 45, and at column 4, line 53 of the Bohn '489' reference, Bohn uses the phrase "BP = Band-pass filter 45 is inverting ...". Block 45 is therefore, Bohn's Band-pass filter.

Figure 1 in Bohn shows that the input to the Band-pass filter 45 is connected to node 25. However node 25 is not "coupled to the buffered program signal" as recited in the above claim phrase. In the Bohn topology, the Band-pass filter 45 is used in the feedback path from nodes 25 to 84 whereas in claim 11, in the subject application, and in the other independent claims in the subject application, the Band-pass filter 22 is not used in a feedback path but is, instead, used in a forward gain path to obtain a boost in the low frequency spectrum of the buffered program signal.

not in
the
claim

Referring to Figures 1, 2, and 3 in the subject application, note that the **input** of Band-pass filter 22 is coupled to node 16, where the buffered program signal is provided. The subject application states at page 5, line 29 that"

"The all pass phase inverter 18 has an input coupled to receive the buffered program signal at terminal 16"

At page 5, line 36 and on page 6, lines 5 through 9, of the subject application (as amended), the application explains that:

"The Band-pass filter 22 is connected to receive the buffered program signal from terminal 16 and amplify and phase invert a narrow range of low frequency of the buffered program signal to provide an inverted Band-pass boosted program signal to terminal 24[.,,].

Therefore, the input to the Band-pass filter 22 at node 16 is the buffered program signal and the output of the Band-pass filter 22 at node 24 in the subject application is an "inverted Band-pass boosted program signal". Each of the independent claims in the subject application contains a closing phrase equivalent to or similar to the following:

"a summing amplifier for adding the inverted buffered program signal to the inverted Band-pass boosted

program signal and for providing a composite output signal.”

The above phrase shows that the summing amplifier 26 receives and adds the “inverted Band-pass boosted program signal” at node 24 to the inverted buffered signal.

5 However, the Bohn reference does not show the output of the Band-pass filter 45 connected to the input of the summing amplifier 35. Bohn connects the output of the Band-pass filter 45 to the slider pot in the **feedback loop**.

10 The Bohn reference uses a plurality of constant Q Band-pass filters. Each of the filters is assigned to a frequency band and there is no means provided in Bohn for shifting the center frequency of any of the constant Q Band-pass filters 45. However, the invention claimed in the subject application provides potentiometer 54 on Figures 1 and 2 as a means of moving the center frequency of Band-pass filter 22 to accommodate the speaker in use. In addition, the Band-pass filter is used to amplify the buffered program
15 signal within its frequency band of interest. The Band-pass filter is not used to “cut” or attenuate the amplitude of the signal being processed as in the case of the Bohn topology.

Since the Band-pass filter 45 of Bohn is not connected to receive the buffered program signal from the input buffer 12 and since the Band-pass filter 45 of Bohn is not
20 connected in the feed forward path to the summer, applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. 103 because the Band-pass filter 45 of Bohn is not used in the same way, nor for the same purpose, as in the rejected independent claims 11, 15 and 18. There is no apparent suggestion in Bohn or in the ‘897’ reference
25 for the use of a Band-pass filter in the forward signal path for the purpose of obtaining a gain boost of the low frequency compensated signal Vlp component in the composite buffered program signal supplied at node 16 to Band-pass filter 22..

30 In view of the arguments set forth above, the Patent and Trademark Office has not made out a *prima facie* case of obviousness under the provisions of 35 USC 103 and thus the rejection must be withdrawn.

35 The referenced independent claims 11, 15 and 18 (as amended) are now believed to be in condition for allowance and allowance is requested. All remaining dependent claims depend from allowable independent claims therefore their allowance is also requested.

Changes to Specification:

The specification was reviewed and numerous changes are incorporated to eliminate redundancies, and to conform the terminology for the Vhp, Vmp and Vlp signals to be "high frequency compensated signal", "mid-range frequency compensated signal" and "low-range frequency compensated signal" respectively.

New matter has not been added. The claims are now believed to be in condition for allowance and allowance is respectfully requested. The Examiner is encouraged to feel free to call Applicant's attorney for the purpose of discussing any item relating to the prosecution which might lead to an early allowance.

Drawing Changes

Figure 1 is amended to add reference number 32 to identify the transfer contact of switch 34. Reference number 32 is used in the specification at page 5, line 17.

Figure 2 is amended to move reference number 20 slightly to the left and to add reference number 24 to the output of the Band-pass filter 22. Reference number 58 is added to top input resistor of integrator 26. Reference number 59 is added to the operational amplifier in integrator 26. Reference number 50 is added to the operational amplifier in the Band-pass filter in phantom block 22. Reference numbers 40 and 42 are added to identify resistors in phantom block 22.

Figure 3 is amended to add reference number 20 to the output of block 18 and to add reference number 24 to the output of block 22. Reference number 28 is added to the output of block 26. Reference number 36 is added to the output of power amplifier 30. Reference number 34 is added above switch 34. Original Figure 1 shows the added reference numbers at the amended locations.

Figure 4 is amended to change reference number 70 to be 78 to be consistent with Figure 3. Reference number 115 is added above the mid-range input to the Summer 74.

In addition to the above description, copies of Figures 1, 2, 3 and 4 is provided in which the changes are shown in red for the convenience of the examiner. Replacement sheets are provided for Figures 1, 2, 3 and 4. The replacement sheets are labeled "Replacement Sheet" in the top margin. The marked up copies are labeled "Annotated Marked-up Drawings" as required by new rule 1.121.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully Submitted,

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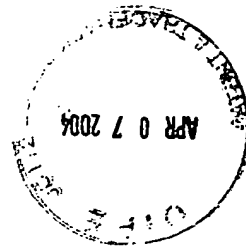
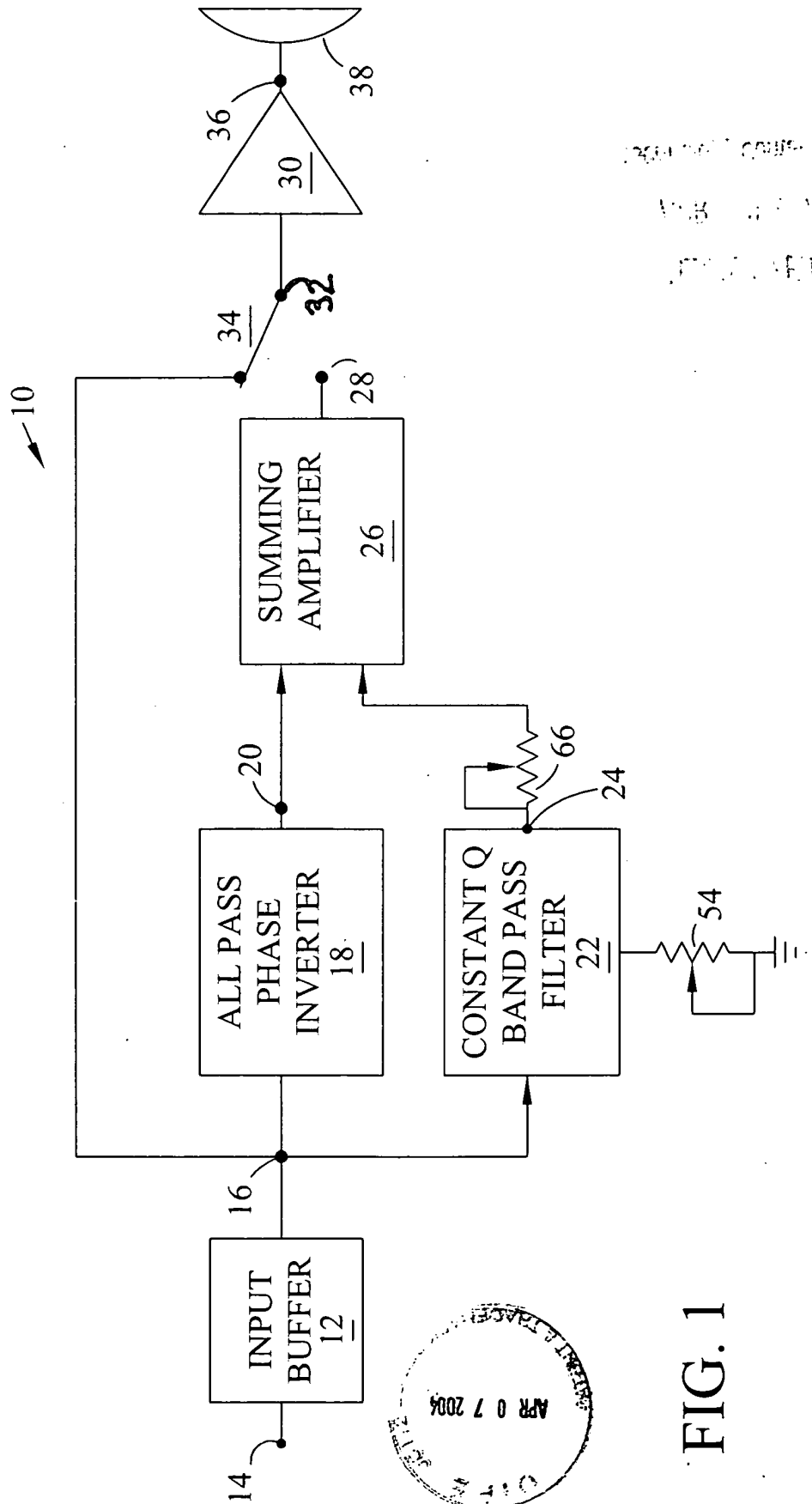
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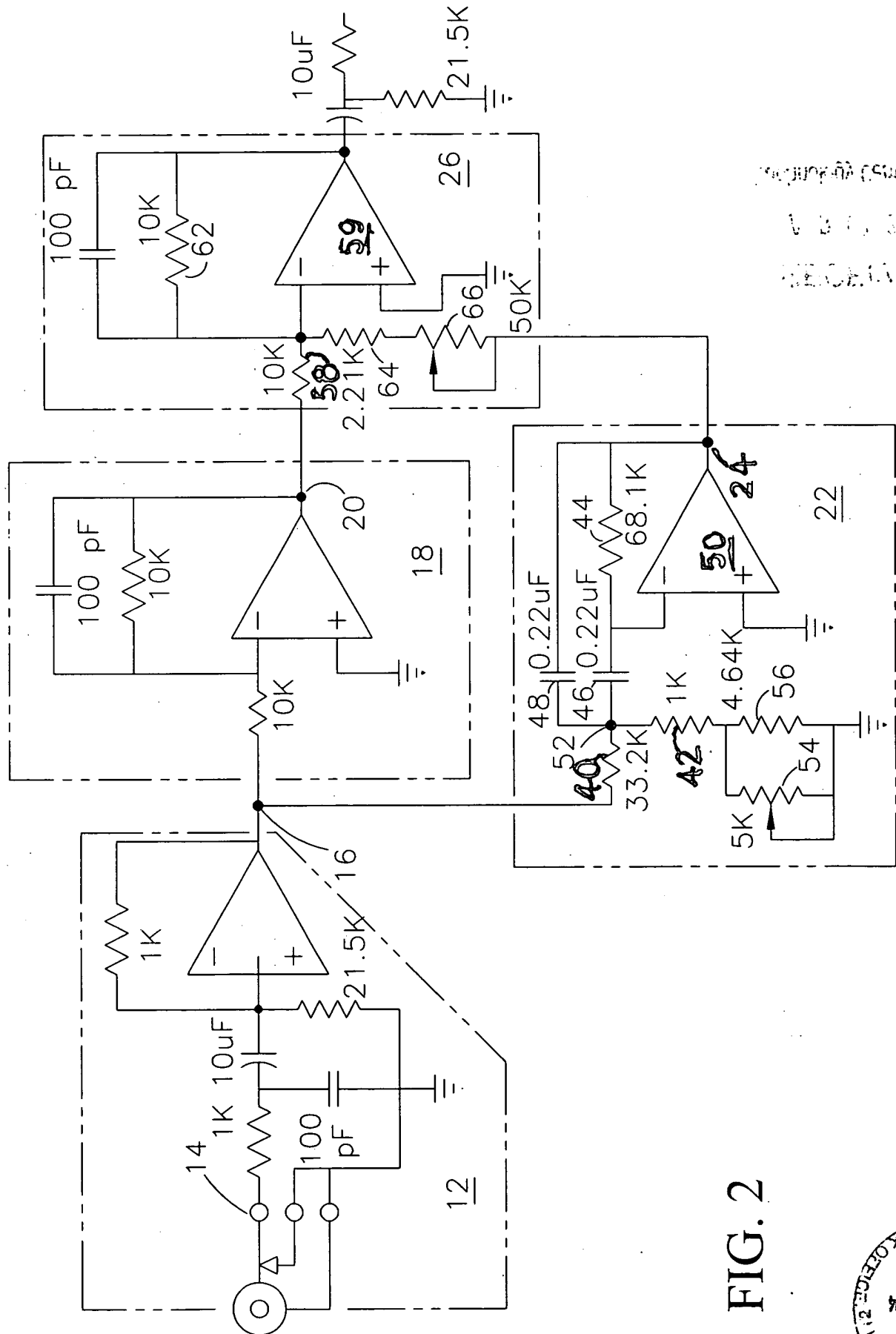


FIG. 2



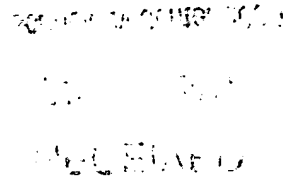


FIG. 3



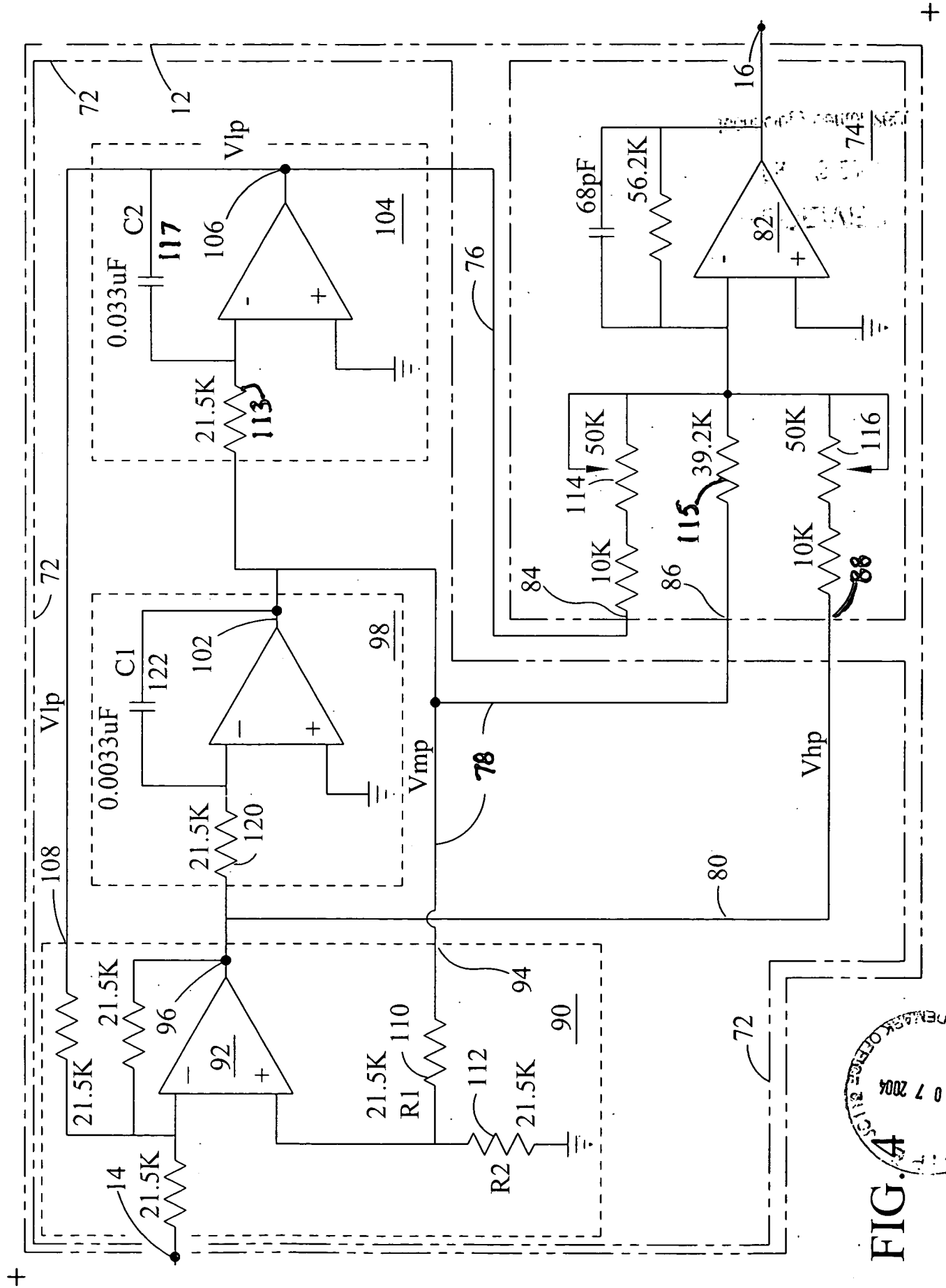


FIG. 4

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